

CLAIMS

Therefore, having thus described the invention, at least the following is claimed:

1 1. A system for providing network-based firewall policy configuration and
2 facilitation, comprising:

3 a firewall facilitation coordinator configured to receive a request to add an
4 application not currently supported by a user's firewall policy, and to generate a time
5 window during which a user can run the application; and

6 a policy modification agent adapted to communicate with the firewall
7 facilitation coordinator, the policy modification agent configured to receive a firewall
8 modification request from the firewall facilitation coordinator, to be aware of
9 communications or packets observed by the firewall during the time window, and to
10 modify the user's firewall policy.

1 2. The system of claim 1, further comprises a firewall process adapted to
2 communicate with the policy modification agent, the firewall process includes the
3 user's firewall policy, a firewall communications or packet inspector and a firewall
4 filter.

1 3. The system of claim 2, wherein the firewall facilitation coordinator is further
2 configured to decode and decrypt the firewall modification request, and further
3 configured to authenticate the user before taking action on the request.

1 4. The system of claim 3, wherein the firewall facilitation coordinate further
2 comprises at least one of a secure transceiver, a firewall facilitation coordinator
3 controller, a user notification authenticator, a user database, or a firewall policy
4 configuration/modification window generator.

1 5. The system of claim 4, wherein the policy modification agent further
2 comprises at least one of a secure transceiver, policy modification agent controller,
3 policy modifier, blocking history checker or blocking database.

1 6. The system of claim 5, wherein the user exercises the application during the
2 time window with that application transmitting/receiving communications or packets
3 through the network-based firewall with communications or packets associated with
4 the application passing through the network-base firewall unblocked.

1 7. The system of claim 5, wherein during the time window, the policy
2 modification agent via the firewall process examines communications or packets
3 associated with the application and modifies the user's firewall policy such that the
4 communications or packets are allowed to pass through the firewall process
5 unblocked.

1 8. The system of claim 1, further comprises a blocking history checker for
2 checking communications or packets observed during the time window to be
3 associated with the application in order to identify questionable communications or
4 packets which are defined as those communications/packets or
5 communications/packet types that are already part of the user's firewall policy or
6 communications or packets previously blocked at times other than during the time
7 window but which are now observed during the time window.

1 9. The system of claim 8, wherein the policy modification agent is configured to
2 not modify the user's firewall policy to include the questionable communications or
3 packets.

1 10. The system of claim 9, wherein the policy modification agent is configured to
2 record the questionable communications or packet types in a blocking history
3 database.

1 11. The system of claim 10, wherein the policy modification agent is configured to
2 send an acknowledgement of questionable communications or packet types recorded
3 in the blocking history database to the user via the firewall facilitation coordinator.

1 12. The system of claim 10, wherein the policy modification agent is configured to
2 attempt to modify the user's firewall policy a configurable number of times and if

3 unsuccessful, to notify the user/customer to seek assistance or to notify appropriate
4 personnel for assistance.

1 13. The system of claim 8, wherein the policy modification agent is further
2 configured to group the types of questionable packets singly and in combination of
3 two or more.

1 14. The system of claim 13, wherein the policy modification agent is further
2 configured to prioritize the groups based on a likelihood that the groups will be
3 required to be added to the firewall policy in order to allow the new application to
4 function properly, and to label the groups in order of priority.

1 15. The system of claim 13, wherein the policy modification agent is further
2 configured to perform successive policy modification attempts to remove previously
3 added questionable packet groups and to add the next highest priority group to the
4 firewall policy.

1 16. A method for modifying a firewall policy of a network-based firewall,
2 comprising:

3 notifying a coordinating entity of a request to modify the firewall policy to
4 incorporate filtering rules to allow communications or packets from a new application
5 to pass through the network-based firewall without being blocked;

6 notifying a policy modifier of the modification request;

7 sending a user an indication of a time period during which the user can
8 exercise a new application; and

9 examining the communications or packets traversing to/from the network-
10 based firewall from/to the user and modifying the user's firewall policy such that
11 necessary communications or packets associated with the new application are allowed
12 to pass through the network-based firewall.

1 17. The method of claim 16, further comprising acknowledging the modification
2 request and sending an acknowledgement of the modification request to a user's
3 processing device.

1 18. The method of claim 16, further comprising authenticating the user before
2 acting on the modification request.

1 19. The method of claim 16, wherein notifying a coordinating entity and a policy
2 modifier of a request to modify a firewall policy step further comprises providing a
3 name of the new application and a time frame for implementation of configuration
4 change.

1 20. The method of claim 16, further comprising sending an acknowledgement of
2 completion of the modification to the user's processing device.

1 21. The method of claim 16, further comprising blocking communications or
2 packets not associated with filtering rules associated with the new application.

1 22. The method of claim 16, further comprising inspecting received
2 communications or packets and checking a blocking history to identify questionable
3 communications or packet types which are defined as those communications/packet
4 types observed during the time window to be associated with the application but
5 which are already included in the firewall policy or communications/packet types
6 which were previously blocked at times other than during the time window but which
7 are now observed during the time window.

1 23. The method of claim 16, further comprising modifying the firewall policy
2 rules formed for the new application to provide for blocking the questionable
3 communications or packets.

1 24. The method of claim 16, further comprising recording the questionable
2 communications or packet types in a blocking history database.

1 25. The method of claim 16, further comprising sending an acknowledgement to
2 the user's processing device to repeat an attempt to modify firewall policy when the
3 new application does not function properly through the network-based firewall.

1 26. The method of claim 16, further comprising notifying the user's processing
2 device after a configurable number of repeat attempts that fail to modify the firewall
3 policy such the new application can function properly through the firewall.

1 27. The method of claim 16, further comprising allowing communications or
2 packets associated with the new application to pass through the network-based
3 firewall.

1 28. The method of claim 22, wherein the examining step further comprises
2 grouping the types of questionable packets singly and in combination of two or more.

1 29. The method of claim 28, wherein the examining step further comprises
2 prioritizing the groups based on a likelihood that the groups will be required to be
3 added to the firewall policy in order to allow the new application to function properly,
4 and labeling the groups in order of priority.

1 30. The method of claim 28, wherein examining step further comprising
2 performing successive policy modification attempts to remove previously added
3 questionable packet groups and adding the next highest priority group to the firewall
4 policy.

1 31. A computer-readable medium for providing network-based firewall policy
2 configuration and facilitation, comprising:

3 logic configured to notify a coordinating entity of a request to modify a
4 firewall policy to incorporate filtering rules to allow communications or packets from
5 a new application to pass through the network-based firewall without being blocked;

6 logic configured to notify a policy modifier of the modification request;

7 logic configured to send a user an indication of a time period during which the
8 user can exercise a new application; and

9 logic configured to examine the communications or packets traversing to/from
10 the network-based firewall from/to the user and modifying the user's firewall policy

11 such that necessary communications or packets associated with the new application
12 are allowed to pass through the network-based firewall.

1 32. The computer-readable medium of claim 31, further comprising logic
2 configured to acknowledge the modification request and logic configured to send an
3 acknowledgement of the modification request to a user's processing device.

1 33. The computer-readable medium of claim 31, further comprising logic
2 configured to authenticate the user before acting on the modification request.

1 34. The computer-readable medium of claim 31, wherein the logic configured to
2 notify a coordinating entity and a policy modifier of a request to modify a firewall
3 policy is further includes logic configured to provide a name of the new application
4 and a time frame for implementation of configuration change.

1 35. The computer-readable medium of claim 31, further comprising logic
2 configured to send an acknowledgement of completion of the modification to firewall
3 facilitation coordinator and to the user's processing device.

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1 36. The computer-readable medium of claim 31, further comprising logic
2 configured to block communications or packets not associated with filtering rules
3 associated with the new application.

1 37. The computer-readable medium of claim 31, further comprising logic
2 configured to inspect received packets and logic configured to check blocking history
3 to identify questionable communications or packet types which are defined as those
4 communications or packet types already included in the firewall policy or
5 communications or packet types which were previously blocked at times other than
6 during the time window but which are now observed during the time window .

1 38. The computer-readable medium of claim 31, further comprising logic
2 configured to modify the firewall policy rules formed for the new application to
3 provide for blocking previously blocked communications or packets.

1 39. The computer-readable medium of claim 31, further comprising logic
2 configured to inspect received communications or packets and to check a blocking
3 history to identify questionable communications or packet types which are defined as
4 those communications/packet types observed during the time window to be associated
5 with the application but which are already included in the firewall policy or
6 communications/packet types which were previously blocked at times other than
7 during the time window but which are now observed during the time window.

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1 40. The computer-readable medium of claim 31, further comprising logic
2 configured to modify the firewall policy rules formed for the new application to
3 provide for blocking the questionable communications or packets.

1 41. The computer-readable medium of claim 31, further comprising logic
2 configured to record the questionable communications or packet types in a blocking
3 history database .

1 42. The computer-readable medium of claim 31, further comprising logic
2 configured to send an acknowledgement to the user's processing device to repeat an
3 attempt to modify firewall policy when the new application does not function properly
4 through the network-based firewall.

1 43. The computer-readable medium of claim 31, further comprising logic
2 configured to notify the user's processing device after a configurable number of repeat
3 attempts that fail to modify the firewall policy such that the new application functions
4 properly through the network-based firewall.

1 44. The computer-readable medium of claim 31, further comprising logic
2 configured to allow the communications or packets associated with the new
3 application to pass through the network-based firewall.

1 45. The computer-readable medium of claim 37, further comprising logic
2 configured to group the types of questionable packets singly and in combination of
3 two or more.

1 46. The computer-readable medium of claim 45, further comprising logic
2 configured to prioritize the groups based on a likelihood that the groups will be
3 required to be added to the firewall policy in order to allow the new application to
4 function properly, and to label the groups in order of priority.

1 47. The computer-readable medium of claim 45, further comprising logic
2 configured to perform successive policy modification attempts to remove previously
3 added questionable packet groups and to add the next highest priority group to the
4 firewall policy.